

### **3.4 Vegetation and Wetlands**

#### **VEGETATION**

Vegetation within the Project Area varies from the greasewood community at lower elevations to the Douglas-fir woodland on north slopes at the junction with Acord Lakes Road (**Figure 3-3**). Vegetation types within the corridor include cultivated pastures, riparian zones along Quitchupah Creek, wetlands, and big sagebrush flats. Signs of heavy grazing are evident in the condition of understory vegetation, lack of vegetation, and soil disturbance.

The Proposed Action (Alternative B) crosses Douglas fir woodland and mountain brush at the upper elevations, wetlands, pinyon-juniper, greasewood, and basin big sagebrush, as well as irrigated pasture.

Alternative C follows Alternative B through the above-listed vegetation types, and then turns to the north and traverses a series of drainages as well as Link Canyon Wash. This area is mainly sparse pinyon-juniper with limited understory; greasewood occurs in the main washes.

Vegetation on the Water Hollow Benches, along Alternative D, consists of an open pinyon-juniper community with an underlying black sagebrush shrub cover, and various grasses and forbs. Chaining to improve wildlife habitat occurred on these benches about 40 years ago.

In the draws, serviceberry, mountain mahogany, and yucca are present on north facing slopes. Nearest the Water Hollow route junction with SR-10 is an area of open pinyon-juniper “parkland” with low sage providing fairly sparse ground cover, and grasses which reflect heavy grazing. Other plants include yucca, Mormon tea, cactus, and the more common variety of townsendia (Jones). Soils on many areas of this route are cryptogamic. The bottomlands are cut by deep gullies similar to the active downcutting in the Quitchupah drainage.

Following is a brief description of each community in the Project Area. Lists of plant species recorded during field review of each Alternative are included in **Appendix H**.

#### **Greasewood Community**

The greasewood community is present throughout the lower elevation portions of the Project Area, in combination with shadscale and/or sagebrush, rabbitbrush, and patchy understory grasses. Included in this type are pockets of a low shrub community (shadscale and sagebrush) where greasewood is lacking.

#### **Low Shrub Community**

This low, desert shrub community occurs as inclusions in the greasewood community and is also found on the gently sloping bench at the junction of Alternative C and SR-10. It includes Castle Valley saltbush, low sage, Mormon tea, snakeweed, and various forbs, grasses, and cacti.

#### **Pinyon-Juniper Community**

The pinyon-juniper community type includes areas of sparse juniper on the steep, rocky slopes above Quitchupah Creek Road, as well as the pinyon and juniper present on slopes in the upper parts of the canyon.

#### **Mountain Brush Community**

The mountain brush community occurs in the bottom areas of the upper canyon and includes patches of gambel’s oak as well as bigtooth maple, serviceberry, woods rose, Oregon grape, sagebrush, rabbitbrush, and manzanita.

#### **Douglas Fir Woodland**

Near the junction of Quitcupah Creek Road and Acord Lakes Road at about 7,600 feet elevation, the vegetation on the north facing slopes transitions to a Douglas Fir Woodland, with Mountain Brush in the drainage bottom. Across the Acord Lakes Road on south facing slopes, the pinyon-juniper community predominates, and includes mountain mahogany.

### **Invasive Species and Noxious Weeds**

The Utah State Noxious Weed List includes plants that have been determined to be especially injurious to public health, crops, livestock, land, or other property. Under the Utah Administrative Code, R68-9, the following weeds have been officially listed as noxious for the State of Utah:

<b>Common Name</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Scientific Name</b>
Bermudagrass	<i>Cynodon dactylon</i>	perennial pepperweed	<i>Lepidium latifolium</i>
Canada thistle	<i>Cirsium arvense</i>	perennial sorghum	<i>Sorghum halepense</i>
diffuse knapweed	<i>Centaurea diffusa</i>	purple loosestrife	<i>Lythrum salicaria L.</i>
Dyers woad	<i>Isatis tinctoria</i>	quackgrass	<i>Agropyron repens</i>
field bindweed	<i>Convolvulus arvensis</i>	Russian knapweed	<i>Centaurea repens</i>
hoary cress	<i>Cardaria draba</i>	Russian olive*	<i>Elaeagnus angustifolia</i>
Johnsongrass	<i>Sorghum halepense</i>	Scotch thistle	<i>Onopordum acanthium</i>
leafy spurge	<i>Euphorbia esula</i>	spotted knapweed	<i>Centaurea maculosa</i>
Medusahead	<i>Taeniatherum caput-medusae</i>	squarrose knapweed	<i>Centaurea squarrosa</i>
musk thistle	<i>Carduus nutans</i>	yellow starthistle	<i>Centaurea solstitialis</i>

\*Sevier County (UDAF 2003)

Neither Sevier County nor Emery County maintains a separate, additional list; both counties have adopted the official State list. The Utah State list added a county noxious weeds addendum list in 2003; Russian olive is listed as an additional noxious weed for Sevier County. According to the Digital Atlas of the Vascular Plants of Utah, field bindweed and hoary cress are the two plants that have been located in Emery and/or Sevier County. These plants could be present in the Project Area but were not located during field inventories.

### **Threatened, Endangered, and Sensitive (TES) Species**

Several TES plant species have the potential to occur in the Project Area. A full discussion of those species is contained in **Section 3.7** and the Final Special Status Species Technical Report, Quitcupah Creek Road EIS (JBR, 2001f).

### **WETLANDS**

The upland plant community is a sagebrush (*Artemisia sp.*) - grass community located on unsurveyed coarse textured soils and unsurveyed fine textured erodible soils of the terraces and benches. A riparian plant community dominated by tamarisk (*Tamarix pentandra*) and willows (*Salix exigua*) exists on the banks of Quitcupah Creek. The stream in Convulsion Canyon from the juncture of East Spring Canyon is deeply incised and riparian zones are limited and narrow.

The most common wetland community at the upper elevations is a herbaceous community of grasses, sedge (*Carex aquatilis*), water cress (*Rorripa nasturtium-aquaticum*), and willows. The wetland community at the lower elevations consists of salt grass (*Distichlis spicata*), rush (*Juncus arcticus*), and tamarisk. The wetland community at the lower elevations consisted of salt grass, virgins bower (*Clematis ligusticifolia*), woods rose (*Rosa woodsii*), silverberry (*Elaeagnus commutata*), maretail (*Hippuris vulgaris*), and *Viola sp.* This wetland community is generally found on sandy alluvial soils and loams of

the floodplains. The wetland community or hydric fringe along the stream banks is absent due to scouring in some places, and well developed at other sites.

Five Jurisdictional Wetlands (JW) were delineated within the survey area. A Jurisdictional Wetland is a wetland determined to be under the jurisdiction of the U.S. Army Corps of Engineers (COE) according to established guidelines. Each is located on the floodplain associated with the stream channel. One wetland is located in an oxbow, not directly connected to the channel. A summary for each wetland is shown in **Table 3.4-1** and map locations are on **Figure 3-3**.

**Table 3.4-1 Jurisdictional Wetlands Types and Acreages**

<b>JW Area</b>	<b>Site</b>	<b>Hydrology</b>	<b>Acreage</b>
44+00*	floodplain	seep	0.07
48+00*	floodplain	spring	0.31
67+00*	floodplain	stream	0.26
213+00	floodplain - oxbow	stream	0.46
255+00	floodplain	stream	0.34
*These JWs are common to all of the action alternatives			

### **Potential Impacts To Vegetation And Wetlands**

The Environmental Consequences of each Alternative, in regard to vegetation and wetlands, are discussed below. First, regulatory consequences are described and then potential impacts to the resource itself.

#### **REGULATORY**

The 404 permitting process would include verification and approval by the COE of the JW delineation for the Quitcupah Creek Road corridor and of the proposed mitigation plan. An individual 404 permit would be required to fill any wetlands. The design under all alternatives would fill two wetlands: the one located at 44+00 (.07 acres) and the one at 67+00 (.26 acres). The individual 404 permit would also include any non-wetland Waters of the U.S. impacts. (The COE has indicated that it would take the lead for all of the wetland and Waters of the U.S. permitting for this project, thus Stream Alteration Permits from the State would not be needed per se, instead, they would be tied to the individual COE permit.)

An individual federal permit from the COE is required when dredge and fill activities are expected to have significant impacts on wetlands or other Waters of the U.S. The Clean Water Act, Section 404, provides direction for this permitting process. The granting of a permit is a “federal action” for purposes of the Endangered Species Act, such that if a listed species may be affected, a 404 permit request triggers the need for consultation with the relevant agency (i.e. USFWS or NMFS). The district engineer makes a decision to issue or deny the permit, and makes a ‘statement of finding document’ available to the public which explains how the permit decision was made.

#### **NO ACTION - ALTERNATIVE A**

The vegetation communities in the Project Area would not be disturbed by the proposed road construction. Current land uses such as grazing would continue to impact the vegetation communities. Wetlands would not be disturbed, nor would they be enhanced under this alternative.

#### **POTENTIAL IMPACTS**

##### **Impacts Common to All Alignments:**

It is estimated that approximately 0.33 acres of Jurisdictional Wetlands in the Convulsion Canyon drainage would be filled by road construction.

Additionally, 1 acre of riparian habitat in the Convulsion Canyon drainage would be impacted by road construction. Removal of streamside vegetation in the upper parts of the Canyon has the potential to increase stream temperature, however the majority of the streamlength below the Forest is fairly open and lacking cover; any minimal increase in stream temperature would not be expected to affect stream habitats or aquatic populations downstream.

#### **QUITCHUPAH CREEK ROAD ALIGNMENT - ALTERNATIVE B**

Approximately 92.3 acres of vegetation would be disturbed by construction of the road, pull-outs, and staging areas. This would include 64.5 acres greasewood community, 1.0 acre pinyon-juniper, 25 acres mountain brush, 0.5 acres Douglas-fir woodland, and 1.3 acres wetland/riparian. Of the total 92.3 acres, it is expected that 47 acres of uplands would be reclaimed. A discussion of reclamation procedures is provided in Section 2.2.

The 92.3 acres of disturbance would be subject to noxious weed invasion until construction was complete and reclamation had stabilized the disturbed acreage.

Additional vegetation would be disturbed during the construction of the SR-10 junction. This disturbance would occur within the UDOT right-of-way or acquired right-of-way.

#### **ALTERNATE JUNCTION AND ALTERNATE DESIGN - ALTERNATIVE C**

Under this Alternative, total disturbed acreage would be slightly more than Alternative B. This 96.3 acres would include approximately 49.3 acres greasewood, 18.2 acres pinyon-juniper, 25 acres mountain brush, 0.5 acres Douglas-fir woodland, 2.0 acres of low shrub, and 1.3 acres wetland/riparian. Approximately 50 acres of uplands would be reclaimed.

The 96.3 acres of disturbance would be subject to noxious weed invasion until construction was complete and reclamation had stabilized the disturbed acreage.

Additional vegetation would be disturbed during the construction of the SR-10 junction. This disturbance would occur within the UDOT right-of-way or acquired right-of-way.

#### **WATER HOLLOW ALTERNATE ALIGNMENT - ALTERNATIVE D**

Approximately 146.3 acres of vegetation would be disturbed by construction of the road. This would include approximately 0.5 acres Douglas-fir woodland, 1.3 acres wetland/riparian, 85 acres pinyon-juniper, 23 acres low shrub, and 36.5 acres mountain brush. Approximately 91 upland acres of the 146.3-acre disturbance would be reclaimed.

The 146.3 acres of disturbance would be subject to noxious weed invasion until construction was complete and reclamation had stabilized the disturbed acreage.

Additional vegetation would be disturbed during the construction of the SR-10 junction. This disturbance would occur within the UDOT right-of-way or acquired right-of-way.

#### **MITIGATION AND MONITORING FOR BUILD ALTERNATIVES**

A noxious weed control plan would be developed in cooperation with the land management agencies and implemented as necessary. Mitigation and monitoring for impacts to wetlands within the Proposed

Action area would be coordinated with the COE during Clean Water Act Section 404 Permitting. The constructed wetland complex and the one enhanced wetland would be monitored for a minimum of five years to insure functioning JWs are established. The reclaimed areas would also be monitored and tested to insure the goal of cover and secondary succession are achieved prior to release (see Quitchupah Creek Monitoring Plan).

Under the proposed wetlands mitigation plan (See Section 2.2), 1.2 acres of willow/weed community would be converted to wetlands, and 1.0 acres of sagebrush community would be converted to a wetlands/riparian community due to realignment of East Spring Canyon.

#### **IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES AND RESIDUAL ADVERSE IMPACTS**

Approximately 45 to 55 acres of permanent disturbance to vegetation communities would occur as a result of the proposed road. Of the 92.3 to 146.3 acres of total disturbance that would occur as a result of the Proposed Action or Action Alternatives, a total of 47 to 91 acres of upland vegetation would be reclaimed. A total of 0.33 acres of wetland and approximately 1.0 acre of riparian vegetation would be disturbed as a result of the Proposed Action or Alternatives but would be mitigated through construction of 1.22 acres of wetlands and overall improvement of the riparian corridor through fencing from grazing. No residual adverse impacts were identified for vegetation or wetland resources within the Project Area.

#### **CUMULATIVE EFFECTS**

The past land practices of grazing and farming have changed the plant communities in the Project Area through overgrazing of vegetation, chainings, seedings, and agricultural development. The current grazing system will reinforce these changes in the future. The Agency Committed Measures, discussed in Chapter 2, would restrict grazing in riparian areas, thereby allowing some recovery of vegetation in these areas over time. While the permanent loss of vegetated acreage would accrue due to the construction of the road, the project would not affect changes in the overall plant communities. Reasonably foreseeable actions such as exploration of federal oil and gas leases could disturb additional acreage in the future but disturbance would be reclaimed unless discovery leads to development. The removal of grazing from 4.7 miles of stream corridor would restore the riparian zone in this reach of the stream.